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Hawkins
M62

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of

Applicant : Don Carl Powell et al
Serial No : 10/080,119
Filed : February 21, 2002
Title : METHOD FOR FORMING A DIELECTRIC LAYER AND SEMICONDUCTOR DEVICE INCORPORATING THE SAME
Docket : MIO 0060 VA
Examiner : D. Le
Art Unit : 2818

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

CERTIFICATE OF MAILING
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on August 23, 2002


Attorney

Reg. No. 29,001

RESPONSE TO SPECIES ELECTION REQUIREMENT

This paper is being filed in response to the Office Action mailed August 9, 2002. In that communication, the Examiner identified two patentably distinct species that he labeled:

Species I: claims 1-12, drawn to a method of forming a dielectric layer on a semiconductor device; and

Species II: claims 13-25, drawn to a method of fabrication of a semiconductor.

The Examiner required applicants to elect one of the disclosed species for examination..

Applicants hereby elect the species that the Examiner labeled Species I, claims 1-12.

This election is with traverse.

Applicants believe that the Examiner made the election requirement based on a reading of the claim preambles rather than a substantive review of the claimed subject matter. All of the claims relate to the formation of one or more conductive and dielectric layers on a semiconductor substrate or substrate containing at least one semiconductor layer. Applicants believe that all of the claims are examinable together.

09/05/2002 AOSMANI 00000129 10080118

01 FC:102
02 FC:103

168.00 OP
126.00 OP

Adjustment date: 09/09/2002 AOSMANI

09/05/2002 AOSMANI 00000129 10080118

01 FC:102
02 FC:103

-168.00 OP
-126.00 OP

09/09/2002 AOSMANI 00000004 10080119

01 FC:102
02 FC:103

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IN THE CLAIMS

Please add the following new claims 26-32 that are directed to the elected species.

26. A method of forming a dielectric layer comprising:
 providing a substrate having at least one semiconductor layer;
 depositing a silicon-containing material from a silicon source over at least a portion of the substrate; and
 forming the dielectric layer by processing the silicon-containing material in a reactive ambient.
27. A method as claimed in claim 26 wherein said silicon source is self-limiting.
28. A method as claimed in claim 26 wherein said silicon-containing material is deposited in a plurality of layers.
29. A method as claimed in claim 26 including depositing a second dielectric layer over the dielectric layer.
30. A method as claimed in claim 26 wherein the silicon-containing material is vapor deposited.
31. A method of forming a dielectric layer comprising:
 providing a substrate having at least one semiconductor layer;
 vapor depositing a silicon-containing material comprising a silazane over at least a portion of the substrate; and
 forming a dielectric layer by rapidly thermally nitridizing the deposited silicon-containing material in a nitridizing agent.
32. A method as claimed in claim 31 including depositing a second dielectric layer over the dielectric layer.

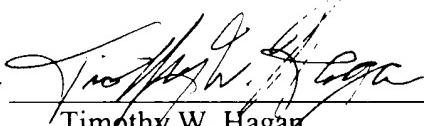
REMARKS

Claims 1-12 have been elected with traverse. New claims 26-32 have been added and are directed to the elected species. At least claim 26 is believed to be generic. Applicants respectfully request substantive examination for all pending claims in the application.

Respectfully submitted,

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